EVENLITE
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Project Name:	Approved By:
Catalog No:	Type No:

LITEMINDER OPTIMUS SPLIT PHASE

8,500VA - 13,300VA Modular Inverter System

The LiteMinder Optimus is the epitome of industry excellence. The Optimus sets a new benchmark, delivering exceptional power density in one of the smallest footprints available on the market. This breakthrough innovation maximizes valuable floor space and provides unmatched flexibility for seamless integration into a wide range of applications. Experience the future of lighting technology with our LiteMinder Optimus and unlock a world of unparalleled efficiency and uncompromised convenience.

DESCRIPTION

- **Modularity:** LiteMinder features unique inverter modules available in increments from 8,500VA, 10,500VA, 13,300VA capacities. Modules are interconnected to build the required system capacity, and can even be field upgraded to increase system sizes!
- **Control Features:** A keypad and LCD display provides user interface and extensive status diagnostics. Self test, Self-Diagnostics, in compliance with UL 924, is field configurable.
- **Web Site Monitoring:** Unique web interface constantly monitors the system status and records all essential data. Users can log on, view, interact and download records as needed. The factory can also monitor, diagnose remotely. Website monitoring free on every inverter (must use option code LGM).
- **Diagnostics:** In addition to Self-test, Self-Diagnostics, LiteMinder also includes unique startup diagnostics to aid in installation and maintenance: eight individual startup alarms (Communications, Set-Up Conflict, Low Battery, Back-feed, Transfer/AC Fuse, Short/ Overload, Miswire, Incorrect AC Input) eight individual Charger Alarms and eight individual Inverter Alarms.

SPECIFICATIONS

- PWM MOSFET and IGBT (Model Dependant) Inverter provide Pure Sine Wave output with less than 3% THD, and fully compatible with LED Lighting Loads
- Fast transfer for H.I.D. compatibility ensures smooth operation of combined lighting loads, transfers in less than 2 mS
- Less than 3% THD, load power factor 0.5 Lag to 0.5 Lead, 98% efficient in standby mode
- Automatic Low Voltage Disconnect (LVD) set at 1.67 VPC
- Shorted circuit protected to 65KAIC tested and approved to UL 6180-5-1 standard
- Crest factor >4 for high inrush demanding loads, overload 120 percent for 10 minutes, 400 percent for 500mS
- VRLA Maintenance Free Lead Calcium Battery's provide the required 90 minute minimum run time in emergency mode
- Battery recharge time is less than 24 hours, meets all UL 924 and NFPA101 Life Safety Code requirements
- Operating temperature 20˚ to 30˚ C
- Brownout protection set for 85% of the nominal line voltage
- UL924 compliant Self-Test/Self-Diagnostics are standard, with interactive LCD display (MMI)

FEATURES

- Modular inverter allows for split phase operation to order
- Automatic restart upon utility power return, no need to manually reset the system
- Input circuit breaker is provided sized to system rating
- Monthly and the annual 90 minute test can be programmed by the user for a specific date and time to ensure NFPA Code Compliance
- Up to 1000 events stored in the memory log on a "FIFO" basis, and is easily accessible thru the MMI (Man-Machine Interface) Panel
- MMI consists of a 5 button keypad for easy menu navigation
- A 4x20 backlit White display with heads-up LED's allow for a quick diagnosis of the system status and alarms
- Five LED indicators provide the status of the Inverter, Charger, AC present, Ready, and Switched Load (if provided with Switched Output Circuit Breakers)
- A dedicated System Test button is provided for a user initiated 30 second on demand test
- An Alarm On/Off LED is provided to indicate that an alarm is present.
- A dedicated Alarm Silence On/Off push button allows the user to silence the audible alarm
- SD card slot allows the user to download all Test, Event and Alarm Logs
- The Meter Menu allows the user to access the Input and Output Voltages, Output Current, Output VA, Battery Voltage, Battery Current, Battery Power, Temperature, System Days, Inverter minutes and Inverter Events
- Internally, the inverter has all galvanized or painted steel parts for all modules and shelves to resist corrosion and provide high durability and longevity
- The inverter and battery cabinets are constructed from 14 gauge CRS and are powder painted with no visible hardware
- Installer friendly front mounted battery terminals for easier and faster installation
- Three Rate Charger circuit is fully temperature compensated for added reliability

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CERTIFICATION

- Listed to UL924, and meets NFPA101 Life Safety Code, NFPA70-NEC and OSHA Requirements
- Buy American Act compliant
- Trade Agreements Act compliant

WARRANTY

- Electronics are warranted for 2 years, extended out to 3 years with the purchase of factory startup. VRLA batteries have a 10-year warranty consisting of 1 year full and 9 years pro-rata - view complete warranty terms online at www.evenlite.com/terms-warranty.
- An extended warranty is available with the purchase of Factory Startup (FS). The Extended Warranty increases electronics coverage to five years. For complete details, please refer to the Central Power Systems Warranty.
- An extended battery warranty is also available, offering coverage periods of either 15 years (EB15) or 20 years (EB20), as specified in the Ordering Guide. This warranty includes one year of full replacement coverage at no charge, followed by 14 (EB15) or 19 (EB20) additional years of pro-rata coverage.

ORDERING GUIDE

LMOPT-13300-1S-LC-ID-OD-S4-TA-Z4-FS

MODEL	VA RATING	CONFIGURATION	BATTERY TYPE	INPUT VOLTAGE	OUTPUT VOLTAGE
LMOPT	**8500** 8500VA **10500** 10500VA **13300** 13300VA	**1S** Split Phase	**LC** Lead Calcium	**ID** 120V/120V/240V[1]	**OD** 120V/120V/240V[1]
LMOPT		**1S**	**LC**	**ID**	**OD**

OUTPUT BREAKER CONFIGURATION[2,3]		OPTIONS					
C(n)	20A Normally On Output Breaker[4]	**TA**	Trip Alarm for All Circuit Breakers[6]	**Z4**	Seismic Zone 4 Certified	**M(n)**	Maintenance Plan[10]
(n)=	Quantity Required	**TB**	1 Summary/2 Programmable Terminal Block[7]	**RA**	Remote Annunciator	**EB15**	15 Year Extended Battery Warranty[11]
BB	Special Breaker Current Requirement[5]	**MB**	Internal Maintenance Bypass Switch[8]	**KE**	Keyed Lock	**EB20**	20 Year Extended Battery Warranty[12]
		BI	BACnet Integration Module	**BTMS**	Battery Thermal Management System	**UP**	Ship Inverter Less Batteries
		LGM	LifeGuard® Monitoring	**FS**	On-Site Startup Commissioning	**EPO**	Emergency Power Off
		DT	60ms Delayed Transfer	**EW**	5 Year Extended Warranty[9]	**BL**	Output Breaker Locks[13]

ORDERING NOTES

1 L-N/L-N/L-L - 3 wire and ground
2 See Output Breaker Quantity Limitations table
3 Split phase inverters require breakers per phase. Must be specified in multiples of 2.
4 Consult factory for Normally Off and Switched output options
5 Contact factory
6 Maximum number of breaker trip alarms model dependant
7 For form C dry contacts
8 Make before break
9 Requires On-Site Startup Commissioning [FS]
10 N=years (minimum: 2 / maximum: 5)
11 1 full year with 14 years pro-rated
12 1 full year with 19 years pro-rated
13 1 provided per output circuit breaker specified

Fill in fields from categories above and complete type and part number.

Type No:

Full Part No:

OUTPUT BREAKER QUANTITY LIMITATIONS	
8500VA, 10500VA & 17000VA	
36X20A	Normally On Without [TA] or [MB]
34X20A	Normally On With [MB]
24X20A	Normally On With [TA]
22X20A	Normally On With [TA] or [MB]

DIMENSIONS, WEIGHT & LOAD CAPACITY

MODEL	NO. OF CABINETS	CABINET WIDTH	CABINET HEIGHT	CABINET DEPTH	CABINET WEIGHT	BATTERY CABINET WEIGHT	TOTAL BATTERY WEIGHT	TOTAL SHIPPING WEIGHT	MAX BTUs HOUR AT FULL LOAD	MAX CONNECTED LOAD	
										90 MINUTE RUNTIME	120 MINUTE RUNTIME
LMOPT-8500	2	26.5"	77"	25"	490 lbs	490 lbs	1,308 lbs	2,276 lbs	741	8,500 VA	6,187.5 VA
LMOPT-10500	2	26.5"	77"	25"	490 lbs	490 lbs	1,620 lbs	2,600 lbs	973	10,500 VA	7,875 VA
LMOPT-13300	2	26.5"	77"	25"	490 lbs	490 lbs	1,932 lbs	2,912 lbs	1,231	13,300 VA	9,975 VA

INPUT CURRENT & BTU CHART

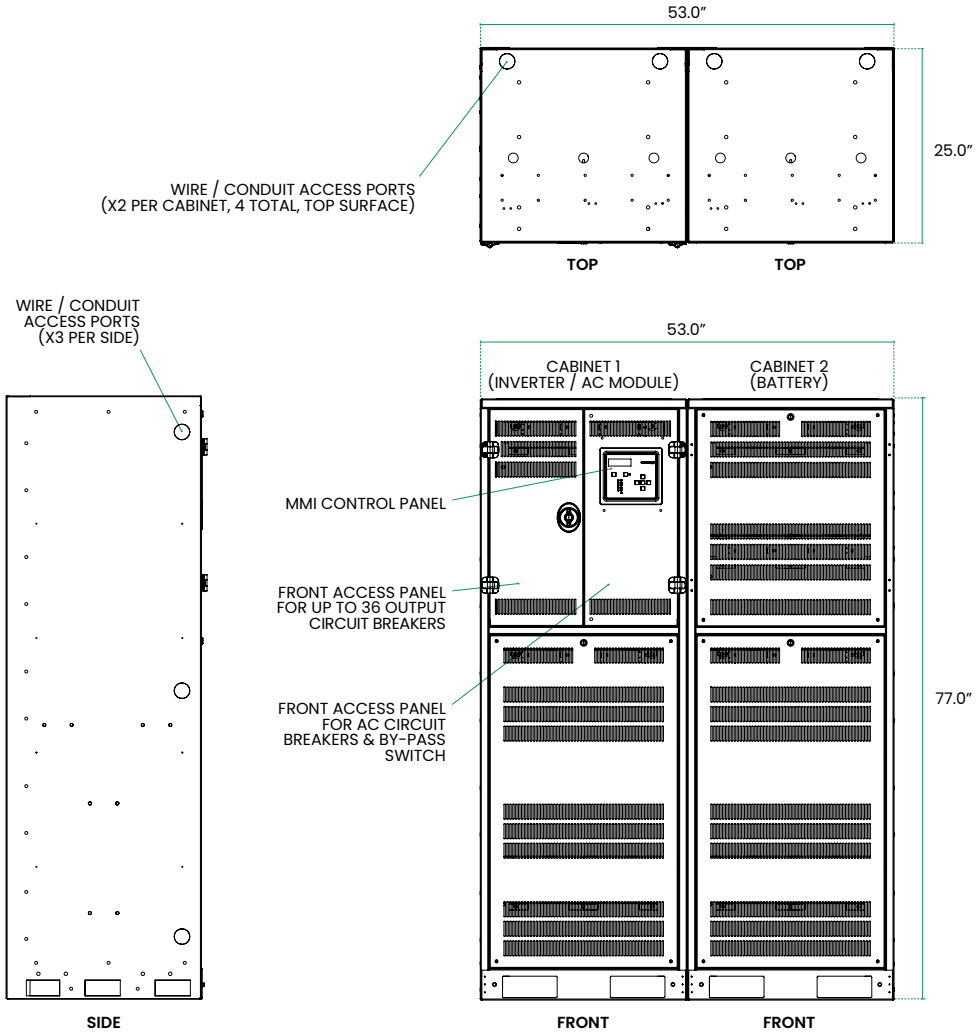
INPUT POWER	INPUT VOLTAGE	INPUT CURRENT	SUGGESTED FEED BREAKER	MAX BTUS HOUR AT FULL LOAD
8500	120 / 208	29.5	40	580
	277 / 480	12.8	20	
10500	120 / 208	36.5	50	716
	277 /480	15.8	20	
13300	120 / 208	46.1	60	907
	277 /480	20.0	30	

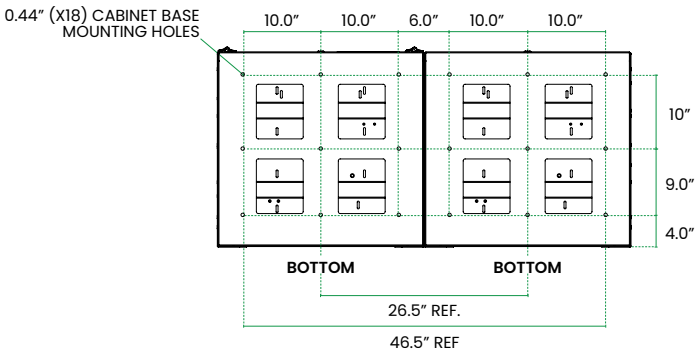
NOTES

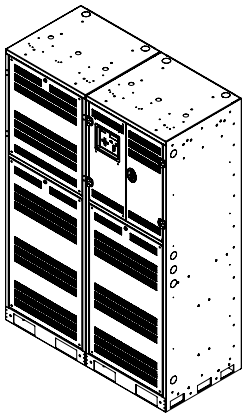
- Input Current = Output Current + Max Charge Current
- Suggested Feed Breaker sizes are rounded up in 10 Amp increments
- Input Power requires 3 wires, Neutral and Ground. Neutral is passed through and current carrying - Feeder Neutral to be sized same as line conductors.
- KAIC Rating for all models = 65KAIC (UL rated per UL 61800-5-1)
- Short Circuit current rating = 65KA for ALL models.

DIMENSIONS

2 CABINET CONFIGURATION

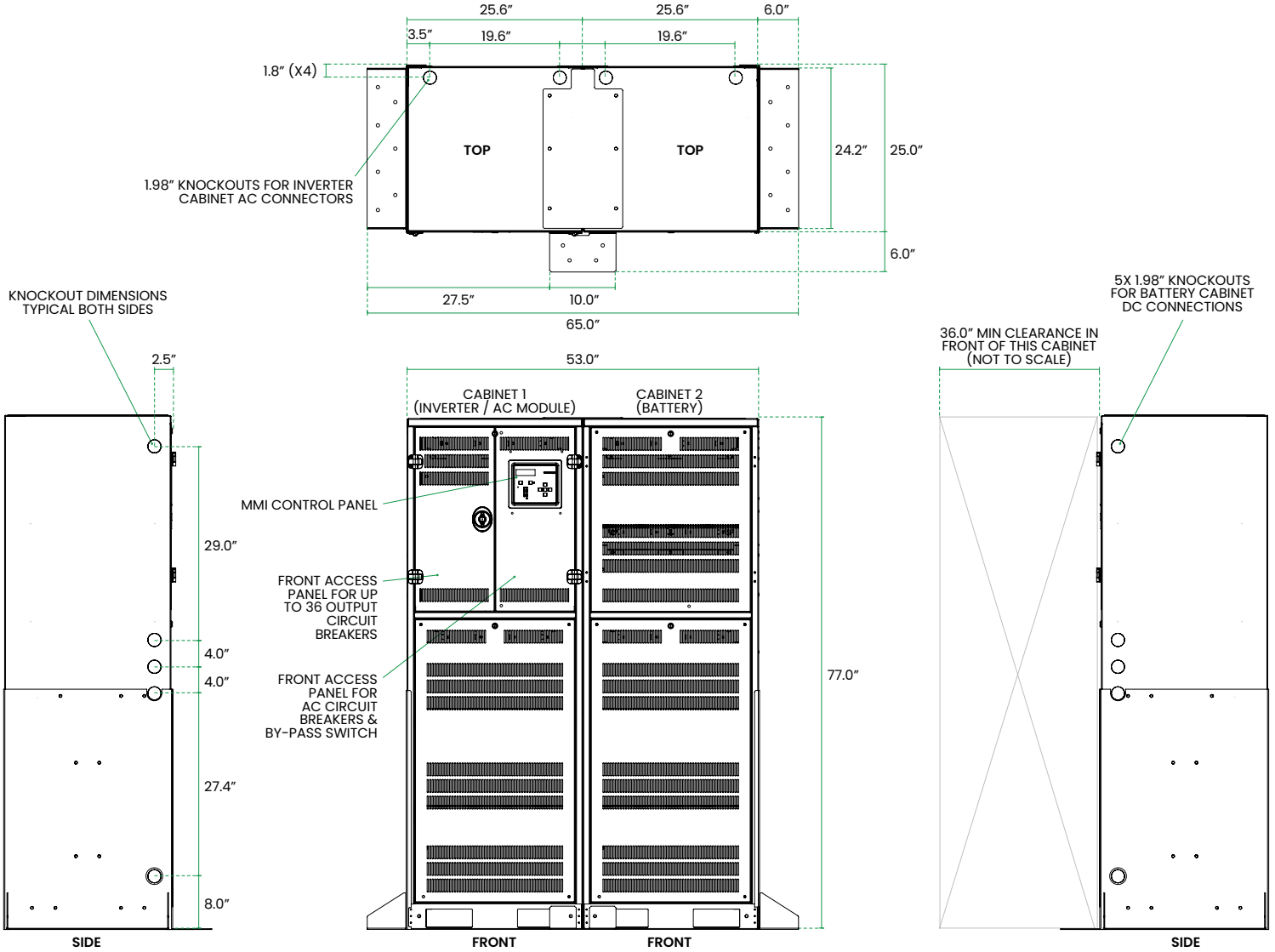


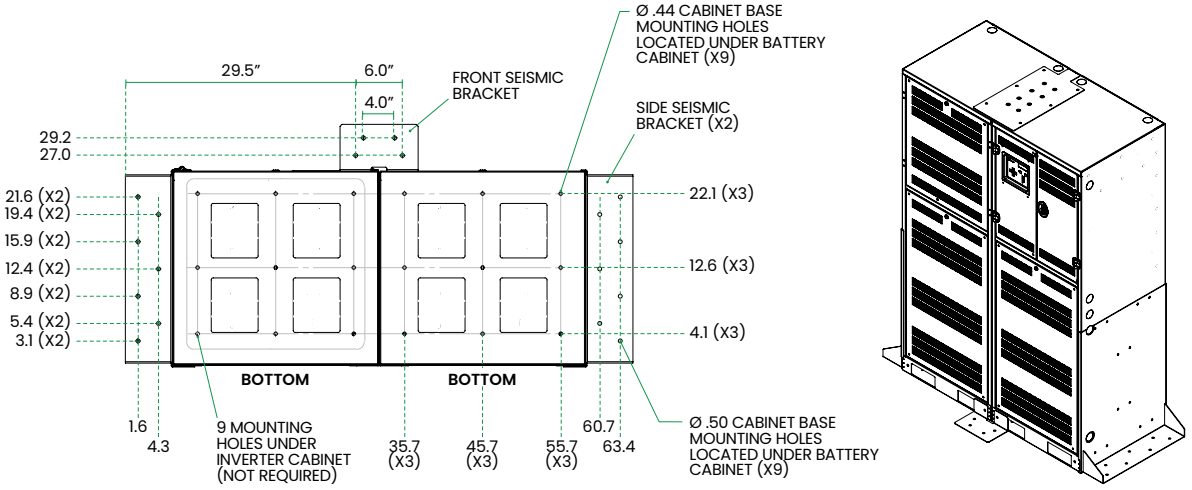




DIMENSIONS (CONTINUED)

2 CABINET CONFIGURATION WITH SEISMIC BRACKETS





BMS INTERFACE POINTS LIST

POINT NAME	BACNET OBJECT TYPE	BACNET OBJECT ID	MODBUS REGISTER
Inverter	BI	1	10001
Charger	BI	2	10002
AC Present	BI	3	10003
Ready	BI	4	10004
Switched Load	BI	5	10005
Alarm Summary	BI	6	10006
Bypass	BI	7	10007
Circuit Breaker Tip	BI	8	10008
Startup Fault	BI	9	10009
Charger Fault	BI	10	100010
Inverter Fault	BI	11	100011
Input Voltage (Phase A)	AI	1	30001/30002 (FLOAT)
Input Voltage (Phase B)	AI	2	30003/30004 (FLOAT)
Input Voltage (Phase C)	AI	3	30005/30006 (FLOAT)
Output Voltage (Phase A)	AI	4	30007/30008 (FLOAT)
Output Voltage (Phase B)	AI	5	30009/30010 (FLOAT)
Output Voltage (Phase C)	AI	6	30011/30012 (FLOAT)
Output Current (Phase A)	AI	7	30013/30014 (FLOAT)
Output Current (Phase B)	AI	8	30015/30016 (FLOAT)
Output Current (Phase C)	AI	9	30017/30018 (FLOAT)
Battery Voltage	AI	10	30019/30020 (FLOAT)
Battery Current	AI	11	30021/30022 (FLOAT)
Temperature	AI	12	30023/30024 (FLOAT)
Output VA (Phase A)	AI	13	30101/30102 (UINT32)
Output VA (Phase B)	AI	14	30103/30104 (UINT32)
Output VA (Phase C)	AI	15	30105/30106 (UINT32)
Battery Power	AI	16	30107/30108 (UINT32)
System Runtime (Days)	AI	17	30109/30110 (UINT32)
Inverter Runtime (Minutes)	AI	18	30111/30112 (UINT32)
Inverter Runtime (Seconds)	AI	19	30113/3014 (UINT32)
System Events	AI	20	30115/30116 (UINT32)